

Fig. 1

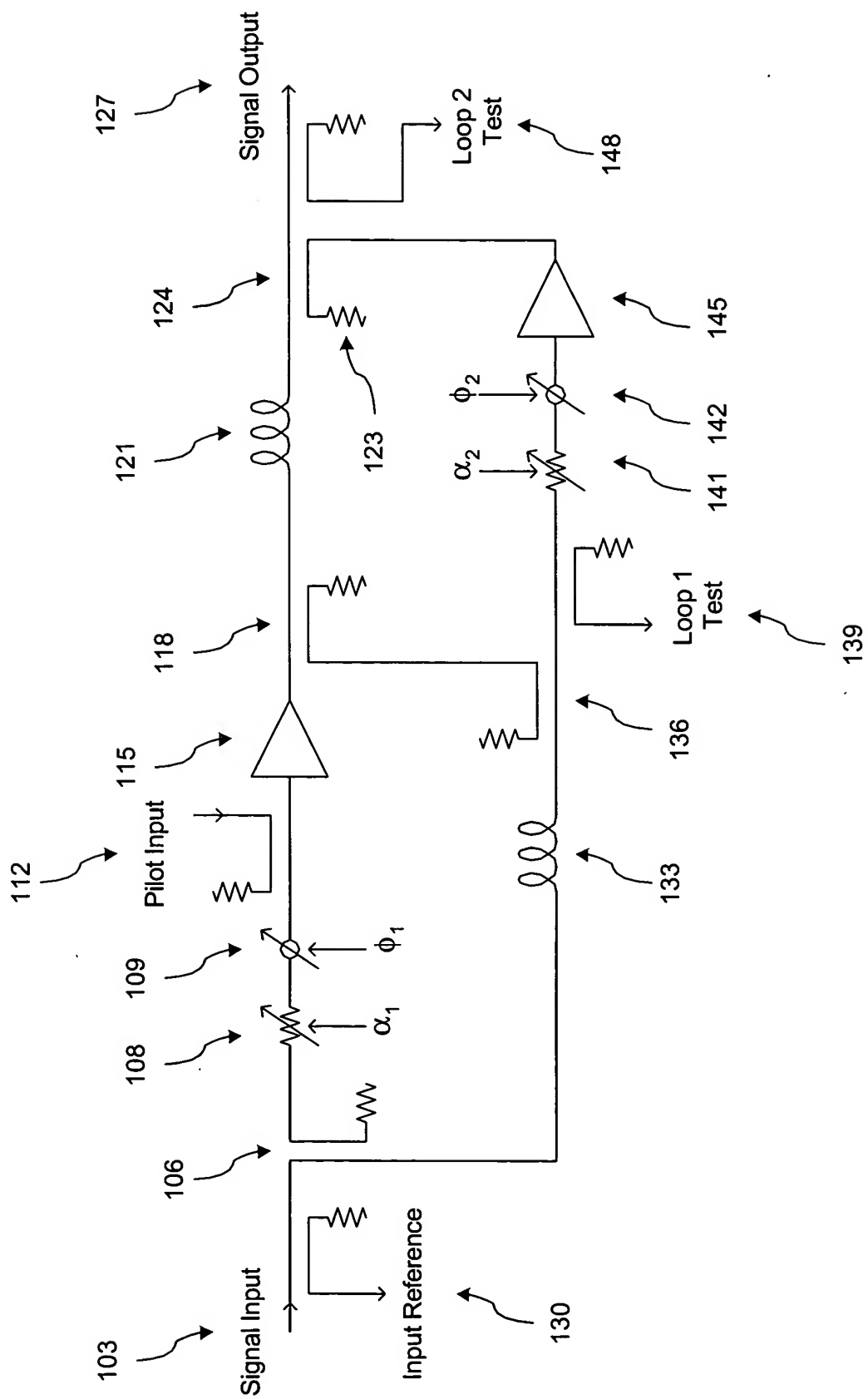


Fig. 2

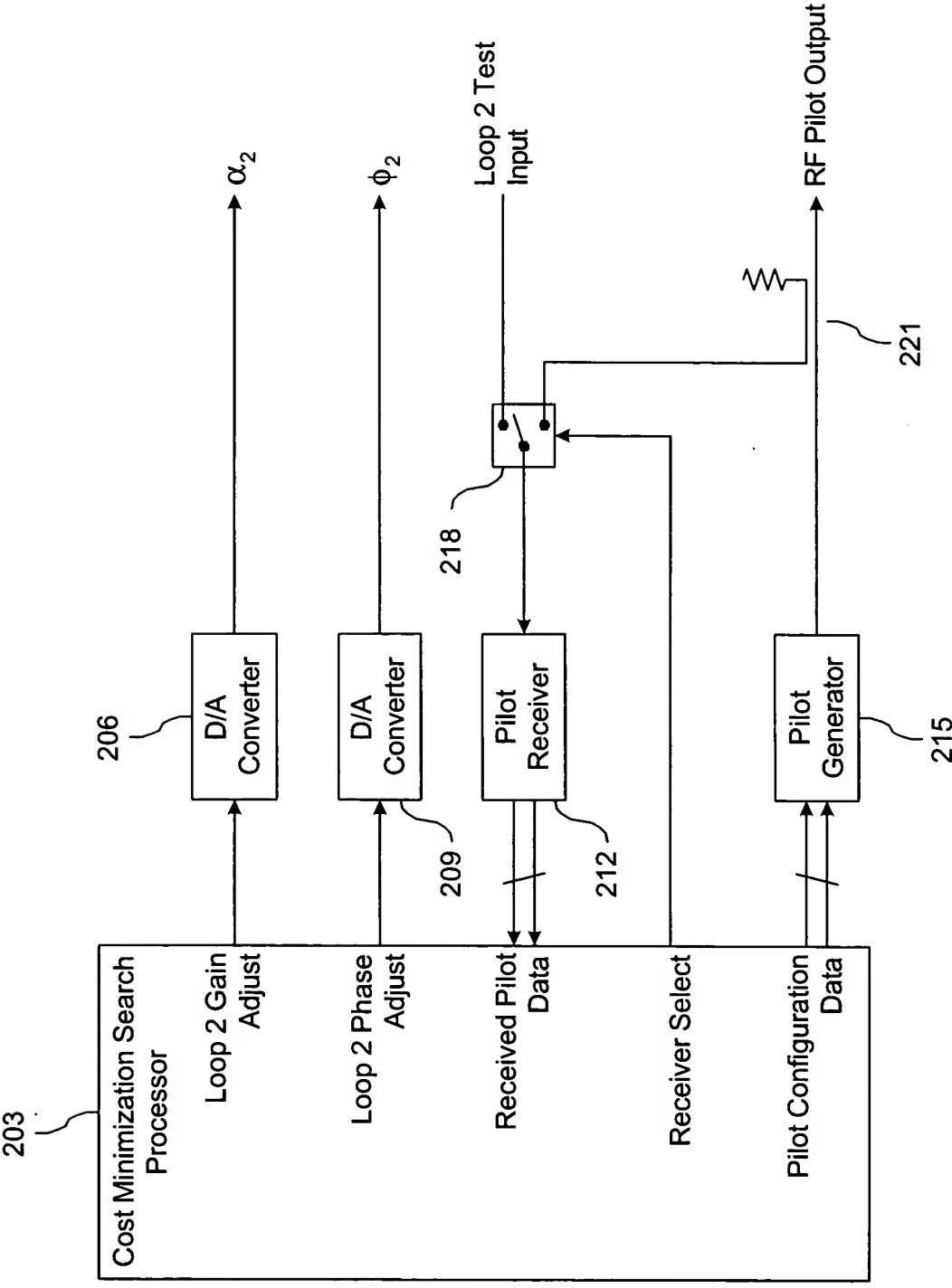


Fig. 3

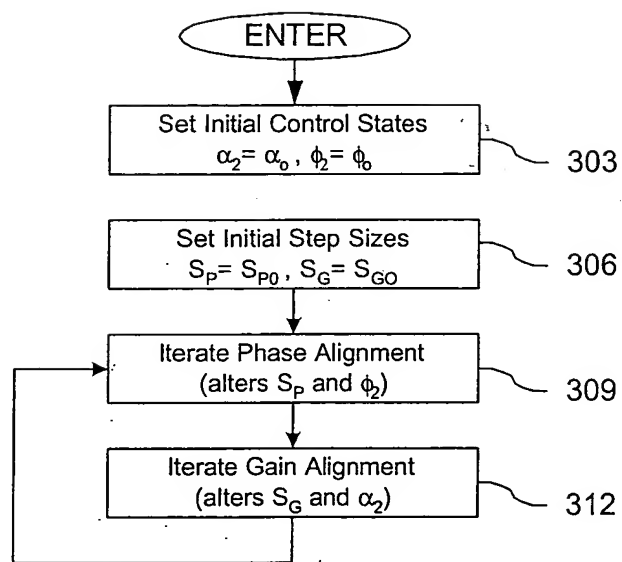
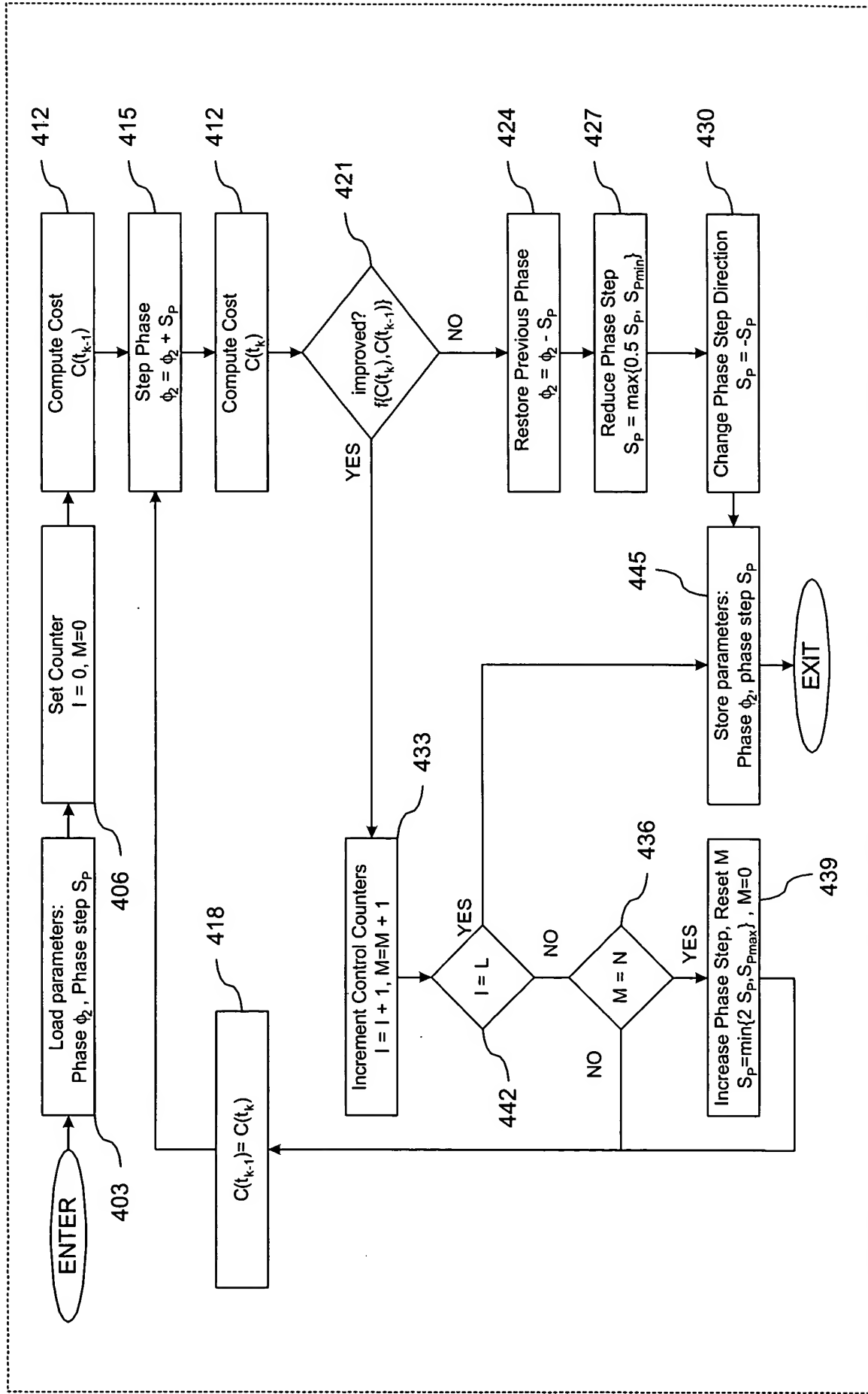


Fig. 4



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graph TD
    ENTER([ENTER]) --> 506[Load parameters:  
Gain α₂, gain step S_G]
    506 --> 506[Set Counters  
I = 0, M = 0]
    506 --> 412_1[Compute Cost  
C(t_{k-1})]
    412_1 --> 515[Step Gain  
α₂ = α₂ + S_G]
    515 --> 412_2[Compute Cost  
C(t_k)]
    412_2 --> 421{improved?  
f{C(t_k), C(t_{k-1})}}
    421 -- YES --> 533[Increment Control Counters  
I = I + 1, M = M + 1]
    421 -- NO --> 524[Restore Previous Gain  
α₂ = α₂ - S_G]
    524 --> 527[Reduce Gain Step  
S_G = max{0.5 S_G, S_{Gmin}}]
    527 --> 530[Change Gain Step Direction  
S_G = -S_G]
    530 --> 545[Store parameters:  
Gain α₂, gain step S_G]
    545 --> EXIT1([EXIT])
    533 --> 542{I = L}
    542 -- YES --> 545
    542 -- NO --> 536{M = N}
    536 -- YES --> 539[Increase Gain Step, Reset M  
S_G = min{2 S_G, S_{Gmax}}, M = 0]
    539 --> 412_1
    536 -- NO --> 412_1
    542 -- NO --> 412_1
  
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Fig. 6

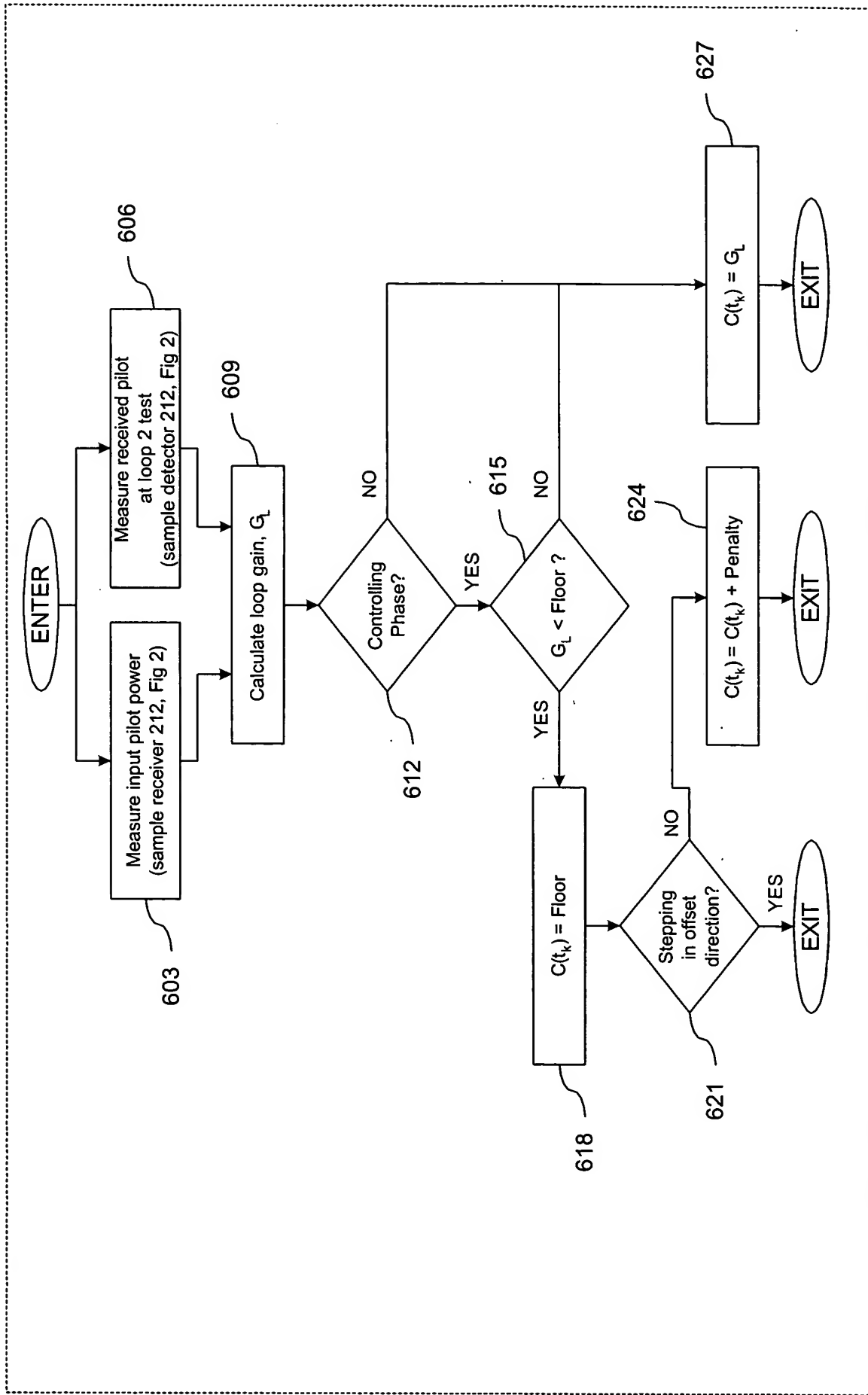
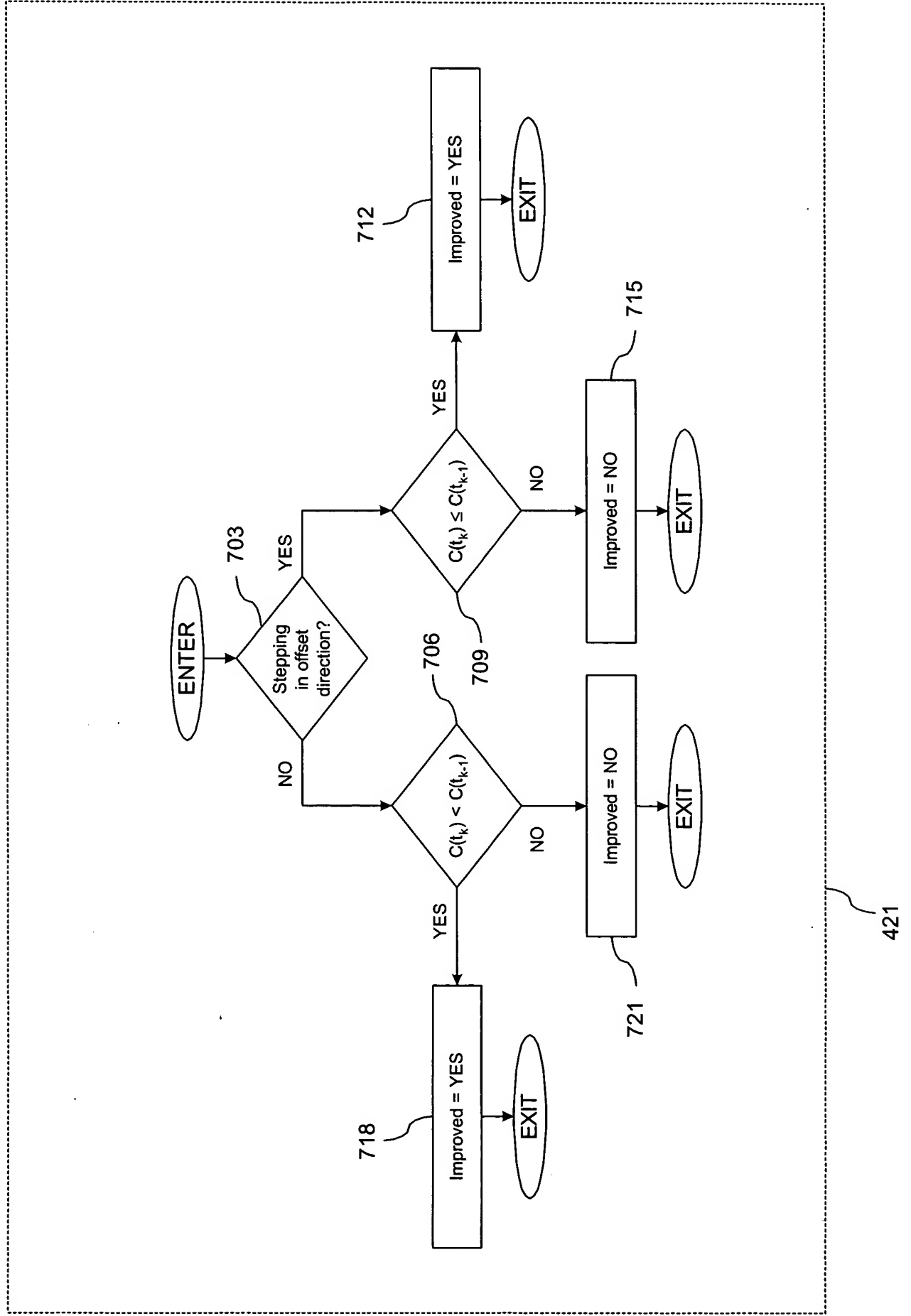


Fig. 7



Loop Gain 3-D map

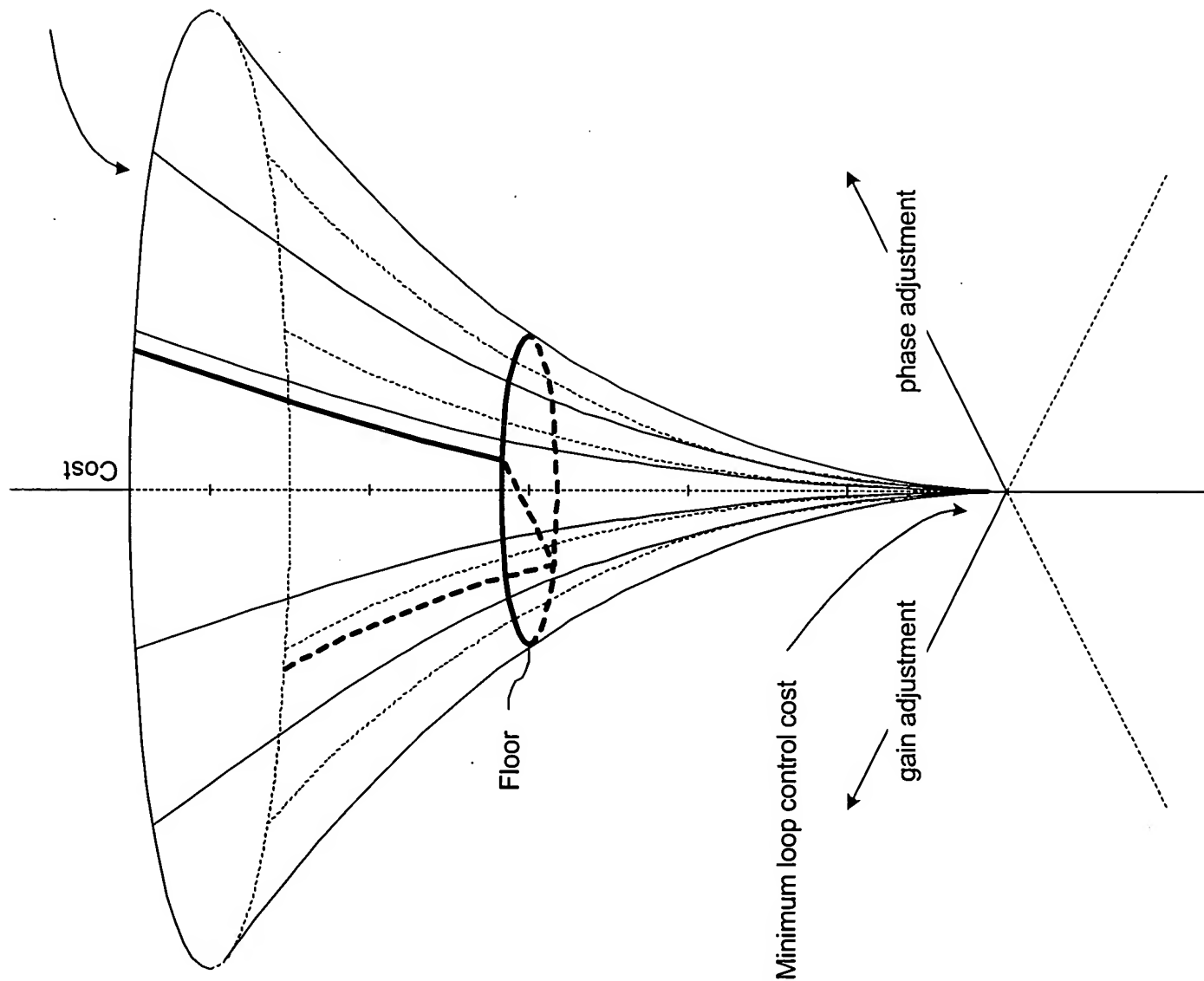


Fig. 8

Fig. 9

